

NOTES ON BREEDING *LEPTIDEA SINAPIS* AB. *BRUNNEOMACULATA* STAUDER: THE WOOD WHITE

By JOHN PAYNE*

The male of this aberration is well-known to collectors of aberrant forms, since a number have been taken over the years, and the earliest record is that of Frohawk (1924), who refers to one taken in 1914. The female on the other hand is less frequent, though the late Alan Collier mentioned (*in litt.*) one taken in recent years by Mr. K. N. Bascomb, but I do not know the details and cannot find any reference to it in the literature. However, when in June 1978, Mr. Alan Sharman brought me a female *brunneomaculata*, I thought it too good an opportunity to miss to try and breed this genetic character. Accordingly, the butterfly was caged with a large bunch of Bird's-foot Trefoil (*Lotus corniculatus*) in flower and fed rain water, and before she died she had laid 23 ova which resulted in 23 overwintered pupae.

The emergence of *L. sinapis* in the wild is sometimes strange — first a general pattern of males with the odd female, going on to a peak of males and female, and often a 'tail' of mostly, and in some seasons *only*, females. So that I think that it happens that a goodly number of females are not found by males. This was evident on the occasion of this breeding: a strong 'tail' of females with no males still alive (the latter sex being notorious for not living long out of their environment, especially when boxed).

All the F1 generation were typical. Four matings were seen, taking place at various times of the day. The females had a choice of foodplant, mostly from gathered seeds (the gathering of seeds should be done early, as they are later eaten by weevils). Besides Bird's-foot Trefoil, the flowers of Bush Vetch (*Vicia sepium* L.) and the Yellow Meadow Vetchling (*Lotus pratensis* L.) are useful as nectar sources, though Bird's-foot Trefoil was found to be the best lasting cut foodplant. The larvae also fed readily on the cultivated form (*L. corniculatus flore-plena*).

White paper was put on the cage bottom so that one might detect feeding by the larvae, since they were extremely well camouflaged when very small and consequently very difficult to find. Later they were divided. No. 1 cage being kept indoors with a temperature range from 60° to 80°F plus, in an attempt to produce a second brood, and an impatience to see results (which could have been most interesting, bearing in mind the forms ab. *erysimi* Borkhausen and ab. *lathyri* Hbn.).

No. 2 cage was kept out of doors in normal temperatures. The only difference resulted in some imagines from the 'hot' cage being smaller, and a female from the No. 2 cage which emerged on 2nd August 1979 was ab. *brunneomaculata*. (Note:

* 10 Ranelagh Road, Wellingborough, Northamptonshire.

The bivoltine tendency puzzles me, and it would be interesting to find what, if anything, triggers it off. A second brood does occur in the Silverstone area in some seasons around the 6th August). The total results from the original female *brunneomaculata* were all typical males and females in the F1 1979, plus only one in August, a female *brunneomaculata* as stated above.

From matings from the type males and females, pupae were overwintered out of doors, and the F2 insects began to emerge in May 1980, with slightly above 25% being aberrant. The colour in the males varied greatly, few having the strong bright colour of the wild ab. and variously described as "pale sandy brown" (Russwurm, 1978), or "ochreus-buff" (Frohawk, 1934), and both a much stronger, stable colour than that of the bred specimens (perhaps the foodplant has an influence on colour?).

The colour in the females was the same as in the males, that is to say varied, but the underside identifies the aberration more certainly, and shows in some a greenish shade. One specimen had the underside lemon yellow. From the F2, further breeding was most difficult, butterflies showing little interest in mating, and when wild males were introduced, the copulation period lasted only minutes compared with a few hours in the wild. Only a few ova were laid, and these proved infertile.

References

- Frohawk, F. W., 1924. *Natural History of British Butterflies*.
 Frohawk, F. W., 1934. *Complete Book of British Butterflies*.
 Howarth, T. G., 1973. *South's British Butterflies*.
 Russwurm, A. D. A., 1978. *Aberrations of British Butterflies*.

A HALVED GYNANDROMORPH OF THE PURPLE HAIRSTREAK:
 QUERCUSIA QUERCUS L. — I wish to record, though rather belatedly, that from six full grown larvae of this butterfly, which I beat out at Pamber Forest, Hampshire on June 9th 1979, on the occasion of the Croydon Natural History Society Field Meeting, I bred five normal examples and one that is a halved gynandromorph. This specimen has the right side ♀ and was exhibited at the 1979 Annual Exhibition of the British Entomological and Natural History Society. — W. LOCKYER, 74, Frant Road, Thornton Heath, Surrey, CR4 7JR [So far as we know, this is only the second British example of a halved gynandromorph in this species. The first, with right side ♂, formed part of lot 75 at the sale of the Samuel Stevens collection on 27.iii.1900, but no particulars of locality or other data were given. — J. M. C.-H.]

COSMIOTES CONSORTELLA (STT.) IN DEVON. — Following Emmet's call for records of this species (*Ent. Rec.*, 91: 13), I took two specimens of *Cosmiotes consortella* (Stt.), both males, at Plympton, Devon on 11th April and 13th August 1980. The area was wasteland and not on calcareous soil. Both were flying in the late afternoon. — R. J. HECKFORD, 67, Newnham Rd., Plympton, Plymouth, Devon.